# BTEC Assignment Brief

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| **Qualification** | Pearson BTEC International Level 3 Foundation Diploma in Agriculture<br>Pearson BTEC International Level 3 Foundation Diploma in Horticulture<br>Pearson BTEC International Level 3 Diploma in Agriculture<br>Pearson BTEC International Level 3 Diploma in Horticulture<br>Pearson BTEC International Level 3 Extended Diploma in Agriculture<br>Pearson BTEC International Level 3 Extended Diploma in Horticulture |
| **Unit number and title** | Unit 23: Land-based Machinery Operations |
| **Learning aim(s)** | **A:** Investigate the types, purpose and safe operation of land-based machinery |
| **Assignment title** | **Investigating Land-based Machinery in the Agriculture Industries** |
| **Assessor** | |
| **Issue date** | |
| **Hand in deadline** | |

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| **Vocational Scenario or Context** | The senior management team at the college want to you to review the main machinery in the Agriculture unit to ensure there is sufficient for learning resources.<br>Your task is to compile a database of Land-based machinery that is specifically aimed at Agriculture.<br>You will need to research the types of machinery currently available including general purpose and those with more specialised functions and present this in a form that allows the senior management team to understand what the college currently owns. |
| **Task 1** | **Task 1** is divided into **2 Parts:**<br><br>**Part 1: General Overview of the range of Land-based Machines**<br><br>For Part 1, you must compile a list or database of the machines found at the college campus, being used in Agriculture. The database can be in a suitable format e.g. a table or spreadsheet<br><br>You need to categorise the machines into types<br><br>• Types of machines **and** their purpose including ride-on, pedestrian operated or even robotic.<br>• Principles of operation, e.g. power source, drive system, ancillary equipment or attachments<br>• Operating conditions, e.g. slope angle, soil conditions<br>• Health and safety considerations, for example:<br>  • Minimum driver age<br>  • Safety features, e.g. cut outs, use of manuals<br>  • Risk assessment<br>  • Use of PPE<br>  • Safe manual handling |

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| | • Consequences of non-compliance<br><br>**Part 2: Machines for specific Horticultural Tasks.**<br><br>You database gives a general view of Land-based machines used in Agriculture. Now, you have been asked to use your knowledge to select appropriate machinery according to specific Agriculture tasks. The tasks will be agreed with your tutor. You will need to produce **two** factsheets or data sheets one of which must be for a ride on prime mover, or ride-on machine e.g., a tractor. In your factsheets, you must include the following factors:<br><br>• Suitability for the task<br>• Health and safety considerations<br>• Problems associated with usage<br>• Principles of operation<br>• Suitability for a range of conditions<br><br>In your factsheets you must give a reasoned analysis of the factors and fully justifying your choices of machines. |
| **Checklist of evidence required** | • Database/list of the machinery at the college Agriculture unit.<br>• Fact sheet(s) justifying the selection of Land-based machines for **two** specific Agriculture tasks. |

| **Criteria covered by this task:** | |
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| Unit/Criteria reference | To achieve the criteria you must show that you are able to: |
| A.D1 | Justify the selection of different types of land-based machinery for a given land-based task. |
| A.M1 | Compare the principles of operation of different types of selected land-based machines |
| A.M2 | Analyse the importance of health and safety requirements in the operation of land-based machinery. |
| A.P1 | Explain the purpose and operation of different types of land-based machines |
| A.P2 | Explain the health and safety requirements in the operation of land-based machinery. |

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| **Sources of information to support you with this Assignment** | Books<br><br>Bell, B; Cousins, S; Machinery for Agriculture; Old Pond Publishing Ltd; 1997; ISBN-13: 978-0852363690<br><br>Bell, B; Farm Machinery; Old Pond Publishing Ltd; 2016; ISBN-13: 978-1910456064<br><br>Magazines<br>Farm Machinery Journal;<br>farmmachineryjournal.co.uk<br><br>Manufacturer's Online Catalogues<br>John Deere;<br>deere.co.uk/en<br><br>New Holland;<br>agriculture1.newholland.com/eu/en-uk?market=uk<br><br>Kubota;<br>kubota.hae.org.uk |